

## **REMARKS**

Careful consideration has been given by the applicants to the Examiner's comments and rejection of the claims, as set forth in the outstanding Office Action, and favorable reconsideration and allowance of the application, as amended, is earnestly solicited.

Applicants note the Examiner's objections to Claims 5-9 in view of improper multiple dependencies under 37 C.F.R. §1.75(c) and appropriate amendatory action has been taken to obviate this particular ground of objection in that applicants have amended the various dependencies as applicable.

Applicants further note the Examiner's rejection of Claims 3 and 4 under 35 U.S.C. §112, first paragraph, in failing to provide an appropriate description concerning these claims, and accordingly, applicants have amended the terminology in the claims to indicate that the probe has a length in a vertical orientation, rather than being variable in length. This amendment should obviate the rejection of Claim 3 on formal grounds. Similarly, with respect to Claim 4, the terminology has also been corrected into conformance with the terminology employed in the specification.

Applicants further note the rejection of Claims 1 and 2 under 35 U.S.C. §102(b) as being anticipated by Dahl, et al., U.S. Patent No. 4,284,951, as detailed in the Office Action; and the rejection of Claims 3 and 4 under 35 U.S.C. §103(a) as being unpatentable over Dahl, et al. Furthermore, Claim 10 has been rejected as being unpatentable over Holt, U.S. Patent No. 5,486,679 in view of Dahl, et al.

Accordingly, upon careful consideration of the art and in order to place the application into substantial order for allowance, applicants have amended the claims in formal respects and indicate herein that the terminology of the claims, as originally filed, clearly and patentably distinguishes over the art.

Particularly, in traverse of the rejection of the claims as being either anticipated or unpatentable, applicants submit as follows, referring to the respective paragraphs in the Office Action.

Responsive to Paragraphs 2-5 of the Office Action, concerning formal matters relative to Claims 3 and 4, this has already been attended to as set forth hereinabove and, thus, renders this particular ground of rejection to be moot.

With regard to Paragraphs 6-9 of the Office Action, wherein the Examiner cites Dahl, et al., U.S. Patent No. 4,284,951 with respect to Claims 1 and 2, applicants note that the claims clearly and patentably distinguish over this particular publication. Review and analysis of the Dahl, et al. publication clearly indicates that there is neither any description nor reference to any alternating current source 32 being a high-frequency current, in the present instance approximately within the range of about 4 to 20 MHz. The power source, which is described in Dahl, et al., may simply be one of alternating current without any particular range given or a pulse direct current. A high-frequency current, such as described and claimed by the present applicants, would not be employable in the device of Dahl, et al., inasmuch as the purpose in the Dahl, et al. publication resides in measuring a resistance between electrodes in a battery electrolyte medium, which varies according to the level of the electrolyte in the battery. The height of the electrolyte level in the battery, thus, depends upon a conductivity between the electrodes and, consequently, on the resistance between the electrode, and at least two (2) power-conducting electrodes and supplied in Dahl, et al. in order to measure this resistance.

To the contrary, pursuant to the present invention as set forth in the claims, the impedance of a sensor is measured on the basis of a single electrode or rod element in a generally high-frequency tank and sensor circuit. Consequently, the measuring principle employed in the present invention in

contrast with Dahl, et al. is completely different, both as to structure and function. Further in contrast with the device of Dahl, et al., the medium containing the electrode is not electrically conductive, as would be the electrolyte in the Dahl, et al. device, but is a dielectric, such as a hydrocarbon liquid contained in the tank. Consequently, Claim 1, which clearly emphasizes this particular aspect, distinguishes over Dahl, et al. and is deemed to be clearly patentable.

Responsive to Paragraphs 10-13 of the Office Action, wherein the Examiner asserts that Claims 3 and 4 are unpatentable in view of Dahl, et al., applicants note that these claims, as dependent upon Claim 1, are clearly patentable. The length of the rod element, which is inserted into the tank containing the liquid and the various characteristics are particularly secondary aspects, which are dependent and provide further limitations to the patentable features of Claim 1.

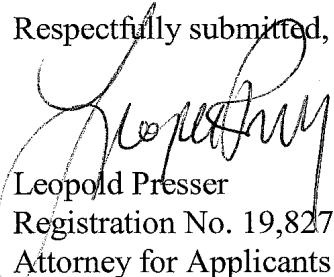
Moreover, with respect to the Examiner's position that it would be obvious to one of skill in the art to employ a high-frequency current of between 4 and 20 MHz, since power supply systems that operate in this frequency range are common, there is nothing in the prior art publication that mentions the use of a high-frequency current. Furthermore, no prior art publications known to the applicants describe the use of a high-frequency current open circuit for a particular application, as described and claimed herein for the measurement of a liquid height in a tank, which allows measuring the height of the liquid with one sensor element in a relatively accurate mode. Consequently, it remained for the present applicants to derive this novel structure and functioning, and these claims are also deemed to be clearly patentable.

With regard to Paragraphs 14 and 15 of the Office Action, applicants note the Examiner's rejection of Claim 10 on the basis of Holt in view of Dahl, et al. However, the Examiner's position that Holt describes an impedance measurement circuit employing a logarithmic amplifier stage and that it would have been obvious to one of ordinary skill in the art to combine this publication with

Dahl, et al., which measures the impedance of an open circuit immersed in fluid, and consequently measures the height of the fluid, is not at all applicable to the present invention. In this connection, applicants respectfully submit that the prior art, whether considered singly or in combination with each other, does not in any manner suggest or describe the use of an open circuit, in effect, a sensor and tank as an assembly, employing a high-frequency current and only one sensor element to measure the height of fluids in the tanks with relatively precise accuracy.

Accordingly, on the basis of the foregoing comments and amendments, the claims are deemed to be clearly and unambiguously directed to allowable subject matter, and the early and favorable reconsideration and issuance of the Notice of Allowance by the Examiner is earnestly solicited. However, in the event that the Examiner has any queries concerning the instantly submitted Amendment, applicants' attorney respectfully requests that he be accorded the courtesy of possibly a telephone conference to discuss any matters in need of attention.

Respectfully submitted,



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